REMARKS

The specification has been amended to to clarify priority information, correct clerical errors, to update information regarding referenced patent applications, and to properly reference figures and compounds.

Specifically, the filing date of U.S. Patent No. 6,066,721 (U.S. Serial No. 08/896,323) has been corrected to reflect the true filing date of this patent as July 17, 1997, rather than July 7, 1997. The corrected filing date is consistent with the date stamped on the return receipt postcard received from the U.S. Patent and Trademark Office upon filing of the above-mentioned application.

In addition, the present application is a continuation-in-part of U.S. Serial No. 09/311,756 rather than a continuation application therefrom. The specification has been amended to reflect this priority clarification. Also, a claim for the benefit of the filing date of U.S. provisional application serial number 60/076,919, filed March 5, 1998, has been dropped.

An Information Disclosure Statement was filed on August 21, 2003. In the Statement, the priority information of the subject application was corrected to reflect the above-mentioned changes. In addition, the relationship of related applications United States Serial Number 10/096,790, and United States Serial Number 10/096,789, both filed March 12, 2002, to United States Serial Number 08/846,247, was also corrected.

The claims have been amended to read on a single invention that closely approximates the subject matter of claim 29 and its dependent claims. All of the compounds claimed are macrolides that are obtained when at least one β-keto modifying (BKM) catalytic region of erythromycin PKS is replaced by a BKM that has at least one additional catalytic activity. The resulting compounds can be shown structurally as set forth in claim 68.

It should be appreciated that

1) the stereochemistry of the claimed macrolide is identical to the stereochemistry shown in present claim 29;

2) The definitions of R^1-R^6 are within the scope of claim 29--they are all methyl groups because of the nature of the extender unit accepted by the modules of erythromycin PKS, and no modifications are required of the AT catalytic domains which control the nature of the extender units employed;

3) R^* is consistent with the natural starter units employed by the erythromycin PKS.

All of the compounds within the scope of the invention are the result of at least one modification of a BKM region of the erythromycin PKS to contain at least on additional catalytic activity as stated above. The following table is intended to elucidate the nature of these modifications.

Table 1

POSITION	CONTROLLED BY MODULE	CATALYTIC ACTIVITY	EMBODIMENTS OF X
13	1	KR	—
11	2	KR	X^1 is OH or H
9	3	—	X^2 is =O or OH or H
7	4	KR/DH/ER	—
5	5	KR	X^3 is OH or H
3	6	KR	X^4 is OH or H

Table 1, in the left-hand column, shows the position in the formula of claim 68 whose oxidation state will be controlled by the modification of the relevant BKM region. The second column lists the module in which the relevant BKM module resides. The third column lists the character of the BKM region in the native module — *i.e.,* the catalytic activities present. As seen,

module 3 has no catalytic activity in the BKM region and thus position 9 in the native product 6-dEB is a keto group. Modules 1, 2, 5 and 6 have only ketoreductase activities, so the positions controlled by those modules normally contain hydroxyl groups. The hydroxyl group at position 13, however, is required for cyclization and thus cannot be further altered without destroying the ability of the cyclic macrolide to form. The BKM region of module 4 contains all possible relevant activities resulting in the presence of hydrogen at position 7 in 6-dEB. This position is unchanged in the claimed compounds.

The last column of the table indicates the possibilities for X^1-X^4 in positions 11, 9, 5 and 3; the most highly oxidized possibility within the scope of the invention is that which natively occurs; the more reduced forms are those which result from the presence of additional catalytic activities. Because positions 11, 9, 5 and 3 are able to exist as hydroxyl groups, the presence of a dehydratase activity in the relevant listed module will provide possible pi bonds at positions 10-11, 8-9, 4-5, and 2-3, respectively.

As is understood in the art, any hydroxyl groups present in positions 5 or 3 may be glycosylated; typically the glycosyl unit at position 5 is D-desosamine and that at position 3 is L-mycarose or L-cladinose.

CONCLUSION

It is believed that the claims presented are consistent with applicants election and represent the subject matter of claims 29-55 in general, but in a less extensive form. Accordingly, examination on the merits is now requested.

If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned at (858) 720-5112.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorizes the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket No. 300622000501.

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Respectfully submitted,

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